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SAVE FOOD BY KILLING

Garden Insects!

U. S. DEPARTMENT OF AGRICULTURE
Office for Food and Feed Conservation
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WHEN insects move in, the expected returns from your home garden can decline quickly. Bountiful yields from home gardens during these postwar years of food shortages and high prices are important. Garden insects should be controlled, both to give you the personal satisfaction of having a good garden and to make a better contribution to the world's food supply.

The important thing about controlling garden insects is to keep them from getting started. This can be done with little effort if you will give a few minutes once a week to insect control. Here is a simple 3-point program which will help you save your garden from insects:

1. Use rotenone once each week.
2. Apply it carefully and thoroughly.
3. Use other control methods where necessary.

Use Rotenone Once a Week

A once-a-week treatment of garden vegetables with rotenone will kill many of the common insects. The relatively few survivors can be taken care of through other insecticides and methods. The big advantage of rotenone is that you can use it effectively against many insects even though you aren't an expert in bug control.

Rotenone in dust or spray form can be bought from nearly any dealer in seeds and farm supplies. Like other insecticides it is sold under many trade names. Apply it to your vegetables once a week, or as close to that schedule as weather permits, and you will be well on the way toward satisfactory control of insects.

Rotenone will control most of the leaf-chewing beetles and caterpillars. It is useful against Mexican bean beetles, bean leaf beetles including Japanese



beetles, and flea beetles on tomatoes, radishes, carrots, beets, and plants grown for greens.

It will control caterpillars on cabbage, broccoli, cauliflower, and lettuce, aphids on turnips, striped and spotted cucumber beetles on melon and squash, European corn borer on sweet corn, as well as melonworms and pickleworms on squash, cantaloups, and cucumbers.

Rotenone can be used with safety on all garden crops. In amounts sufficient to kill insects, it is not poisonous to humans, birds, or animals.

Apply Thoroughly

In this once-a-week treatment, be sure that the rotenone is applied carefully to upper and lower surfaces of the plants. The dust or spray needs to reach under sides of the leaves as well as the top sides. Success will depend upon both the regularity and the thoroughness of the applications.

In buying any insecticide, including rotenone, remember that the active ingredients are important. The percentage of active ingredients is often shown in smaller print on the label of the container. Be sure to check and see that the percentage is high enough to do the job.

Rotenone preparations for dusting should have an active ingredient content of 0.75 percent ($\frac{3}{4}$ of 1 percent) rotenone or better. (Rotenone in this form may be applied as purchased with a dust gun.)

The powdered product suitable for use in a spray mixture should contain 4 or 5 percent rotenone. (Such powders are mixed with water and applied with a sprayer.)

Other Control Methods

Rotenone will not kill some species of insects, especially the waxy aphids on cabbage and broccoli, or leafhoppers on beans and potatoes. If plant lice (aphids) or leafhoppers get a start in your garden, you will have to use some other kind of insecticide. For aphids, use nicotine sulfate. Use the commercial product diluted in water according to directions on the label. *Use it only on plants infested.*

For leafhoppers, use a pyrethrum preparation either as a dust or a spray. Pyrethrum is a common insecticide sold under many trade names. Ask for pyrethrum, then look at the label and check the total pyrethins content, which will be given under "Active ingredients." Get a 0.3 percent preparation.

Squash bugs on pumpkins and squash and harlequin bugs on cabbage are best controlled with sabadilla, a new insecticide. It won't take much. Use it on the infested plants only. Sabadilla is not so readily available as some of the other insecticides listed. If you have difficulty in finding a supply, consult your county agricultural agent.

For cutworms, use a poisoned bran bait before planting your vegetable garden. There are a number of good baits on the market and there is no better way to control cutworms.

Paper collars can be used to keep cutworms from eating off the stems of young transplants, and cardboard disks planted at the base and encircling the plants will protect young cabbage, broccoli, and cauliflower plants from the cabbage maggots.

If you find caterpillars on carrots and parsnips, or hornworms on peppers or tomatoes, pick them off and destroy them.

{For more details on garden insects and their control, get in touch with your county agricultural agent, your State extension entomologist, your State agricultural experiment station, or your local garden club.}

